tion and operation of motor cars, prepared by H. C. Brokaw, technical director of the West Side Y. M. C. A. automobile school. The sixteenth herewith tells how the "knock" may be made a boost.

Some one once said that every knock is a boost. It may be so on the car, if you will but understand that the

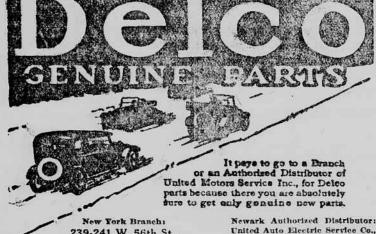
a proneness to accumulate carbon, partly due to the peor grades of gasoline of the present day. Most highpower engines are constructed to have as high compression as possible, almost

from a loose connecting rod bearing, loose cylinder, lack of lubrication or a is well to determine what is at fault. Shut down the engine until you know one of these things is not making the noise. A piston slap, though noisy, or a clicking oil pump, however, is not going to break up the machine.

What Is a Car Known in the machine.

When you go to the expert and he cannot immediately locate the cause of overheating of engine — Fan not overheating of engine — Fan not

the point of pre-ignition; then when covery of the cause naturally suggests



239-241 W. 56th St., 210-212 Central Ave.

United Motors Service

INCORPORATED SERVICE DEPARTMENT OF Delco KLAXON REMY

May Be Made So

Catching the Trouble in Time Will Add Mileage to Your Car's Service, Says an Automobile Expert

Series of Articles for Novice Car Owners

For the benefit of the new automobile on sand one will on and one articles on the construe on sand one and o

far; spark too late, causing overheating; short circuits in ignition system, causing irregular spark; spark plug points defective and overheating; plug

ing overheating; lean mixture, causing worn parts to knock.
Faulty lubrication—Lack of oil; poor

knock is a warning of trouble; that it may mean immediate danger, or ultimate breaking down of the motor or car appliances, and that when you get at the car and find out what the knock is and remedy the trouble, you thought it necessary to eliminate them.

Overheating of engine—Fan not working; pump parts not revolving; other in the metropolitan district, no working; pump parts not revolving; other in the metropolitan district, no interpretation of traffic. In fact, the rates are flow of water; ignition timed too late.

Faulty compression—Eagine designed with too high compression, causting of engine—Fan not working; pump parts not revolving; other in the metropolitan district, no other in the metropolitant d

slow motion pictures of the type that have amused movie fans by slowing down swiftly moving bodies to the point where every action may be analyzed have been utilized by a tire company for a scientific study of just what happens when a heavily loaded motor truck diwhy a cuth drawn off an elehappens when a heavily loaded motor truck climbs a curb, drops off an elevation or bumps over a railroad track.

This is the first time this very valuable form of photography has been used by a tire company. Among the questions the pictures will aid in solving are the effects of heavy blows on highways, trucks, loads and tires.

Can Take Liened Car at Will An important bill introduced in the New York State Legislature provides that if the proprietor of a garage or a repair shop is deprived of the posseasion of an automobile on which he has a lien his lien still continues, and he may without recourse to law seize the motor vehicle, no matter where found.

De Palma Drives to Race

Ralph De Palma, the racing driver. left Thursday to drive in his coupe to Indianapolis. He will stay there until after the 500 mile race on May 31, in which he will drive an imported

Must Prove "Non-Glare"

Among the thirty-day bills in the hands of the Governor is one which requires the Secretary of State to have proof that a motor vehicle is equipped with approved lights before registration is permitted.



LIBERTY SIX

Prospective buyers confirm our own opinion by their ready acceptance of the unmistakable quality of the Liberty.

Its beauty is accepted as the outer sign of inner soundness, which is also recognized in the delightful difference in the way it rides and drives.

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NEW YORK CITY

Auto Insurance Rates Have Joined H. C. of L. Brigade

Particularly in Collision Classification Premiums Have Advanced as Much as Forty-two Per Cent

Along with everything else nowadays the cost of automobile insurance has gone up. The changes in rates announced after a conference of the National Automobile Underwriters and he National Workmen's Compensation Bureau put the premiums in some cases higher than 42 per cent above the rates prevailing prior to the an-nouncement. This increase is par-ticularly great in the case of collision

insurance.
Cars are now divided into four groups: Low priced, medium low priced medium high priced and high priced The metropolitan district is divided into five territories, the first including Manhattan, Brocklyn, the Bronx and Queens, except Far Rockaway and the Rockaway penninsula. The rates are higher in this territory than in any

makes of cars.

In fact, the whole system of automobile insurance now is based on a closer cooperation among the companies, and they are actually using total experience, as in the case of other forms of insurance, rather than individual arrangements.

of theft insurance. In the case of an automobile used exclusively for private "pleasure" there is a reduction in the premium of about 12 per cent, and where, again, the owner alone drive there is a further reduction of 8 pe cent. It is odd that where the owne and the chauffeur both, or the chauf-feur only, drive the car, whether for professional calls or pleasure use only, the premium is far higher than when the owner only drives. This seems to indicate an experience by the insurance companies of less accidents where the

maintenance of the automobile. A greater amount of insurance can be carried for a very little cost on this form.

Property Damage Coverage

Automobile property damage coverage provides indemnity for the assured against loss by reason of his legal liability for injury to or destruction of any property (excluding, however, the property of the assured or in charge of the assured or any of his employees or carried in or upon the automobile of the assured) on account of any accident due to the ownership, maintenance or use of any insured automobile. The company's liability with respect to claims arising from one accident is usually limited to \$1,000 and for a slight increase in premium a higher amount of protection can be had.

Loss of Use

Provides indemnity for resultant loss of use where claim is made for the time during which the claimant's automobile is laid up for repairs due to an accident which occurred with the assured's car. The limitation of coverage

Automobile property damited accommittee, headed by W. C. Poertner, president of the Automobile Dealers' Association, to raise part of the greater New York fund to be administered by the joint distribution committee, headed by W. C. Poertner, president of the Automobile Dealers' Association, to raise part of the greater New York fund to be administered by the joint distribution committee, headed by W. C. Poertner, president of the Automobile Dealers' Association, to raise part of the greater New York fund to be administered by the joint distribution committee, headed by W. C. Poertner, president of the Automobile Dealers' Association, to raise part of the greater New York fund to be administered by the joint distribution committee, headed by W. C. Poertner, president of the Automobile Dealers' Association, to raise part of the greater New York fund to be administered by the joint distribution committee, headed by W. C. Poertner, president of the Automobile Dealers' Association, to raise part of the gufferers from famine, disease and estitution in the war ride

Insurance Information Service to Motorists

Automobile insurance is generally one of the least understood things about a car. A great many owners and operators know far more about the internal mechanism of their machines than they do about this intensely important external feature of automobilism. The Tribune is anxious to be of assistance to motorists who have insurance problems of any description, and for that reason invites any automobilist who wishes information on any phase of automobile insurance to address an inquiry to the Automobile Editor. The inquiries will be answered promptly and competently. General articles on the subject

age coverage for a slight increase of premium. This insurance protection is essential for chaffeurs who operate their own cars for hire and very often hiring another machine in order to maintain their livelihood.

of automobile insurance will appear

from time to time in these columns

at term for the knock which is clusive, get at the car and find out what the knock is and remedy the troubles, the troubles of having and remedy the troubles of having a congression that the car worth mentioning.

Now, there are some fifty-seven users and in the factories and the experts of the factories and the experts of the grace and service station. But with eard you may locate and climinate the other lates and the experts of the area for the consection from the other thanks a chance of getting home afolished the car worth mentioning.

Now, there are some fifty-seven users in the factories and the experts of the grace and school car to eliminate a knock and that in forcing on the gear the shaft had cracked the hub and rim, have troubled the wise heads of the factories and the experts of the grace and single designed with too high compression, causing the signed with too high compression the signed with too high compression that the signed with too high compression that

It is possible, of course, to reduce premiums by the appliance of approved safety devices. For instance, fire extinguishing apparatus cuts down the premium paid on fire insurance and approved locking devices reduce the cost of the city insurance. In the case of the companies have had no experience with. Not all policy. This form of insurance is new protection and one which the companies have had no experience with. Not all companies will write this form of protection.

L. H. GOLDBERG.

Just How Much Speed Do You Need in a Car?

Steady Driving Gets More Distance Than Spurting at Times in a Day's Run

The Automobile Dealers' Association will hold its golf championship this year in the form of 72 holes of medal play instead of match play as last year. There will be two days of 36 holes each, one May 25 and the other June 1. The course has not yet been selected.

Owner drives.

The increasing number of thefts of automobile has operated to run the cost of this kind of insurance very high. The loss ratio has run high in very many classifications and the natural remainders and the natural remainders and the natural remainders and the natural remainders and the other June 1. The course has not yet been selected.

An interesting form of insurance is automobile owner talks a lot about speed and hears a lot about speed, but after all just how much speed is necessary or desirable in a car? Unless it is a properly balanced machine, a speed as high as forty miles and hour is discomforting to those who are riding. Of course, there are some for "loss retions of the speed and hears a lot about speed and hears a lot about speed and hears a lot about speed is necessary or desirable in a car? Unless it is a properly balanced machine, a speed as high as forty miles and hour is discomforting to those who are riding. Of course, there are some The gutomobile owner talks a lot

The loss ratio has run high in very many classifications and the natural result is that premiums have been advanced.

It is that premiums have been advanced.

It an interesting form of insurence is for "loss of use." It applies either to the owner of the car or to any person with whose car his automobile is in collision. That is, if another person's car is smashed up and he has to hire one for his business or for other reasons in the interval this clause covers the cost of that loss of use. It applies also if the owner of a car meets with an accident and his machine is laid up. The general outline of the forms of insurance that may be had by the car owner are:

Covers against loss from liability imposed by law upon the assured for damages on account of bodily injuries, including death resulting therefrom accidentally suffered by any person or persons caused by the automobile owned or operated by the assured. The usual standard amount carried for such protection is limited from \$5,000 to \$10,000. The limitation of one personal injury is \$5,000 and of more than one person \$10,000. This form of coverage does not include accidents to employee or employees of the assured engaged in the use, operation or maintenance of the automobile. A greater amount of insurance can be carried for a very little cost on this form.

Property Damage Coverage

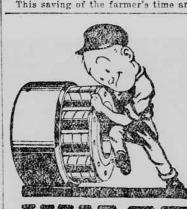
Automobile property damage cover-



routes throughout the country, would

The incorporation of this thought in Good Roads campaign, which will be nationally celebrated during the week of May 17 to 22, signifies the intention of the committee in charge to wage a war on the prices of foodstuffs, the success of which depends entirely on success of which depends entirely on the success of which depends entirely on the foodstuffs release to a sidetrack for an indefinite period, and the congested freight cars awaiting unloading and subject to labor shortage and conditions. Good Roads campaign, which will be the passing of a national highways bill ditions. and the resultant organization of motor truck systems.

temporarily engage other cars while conditions, as relating to produce, distheir automobiles are in the repair closes the many possibilities and beneshop; and claim is made for the cost of the cost fits to be derived by the general public as well as the farmer and com-



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Ship-by-Truck Week
May 17 to 22, a
National Activity

Campaign for Good Roads
To Be Worked in Con-

will prevail. routes throughout the country, would result in a substantial decrease in the high cost of living, particularly in floodstuffs.

The incorporation of this thought in The incorporation of this thought in along the country road, and the newer the platform of the Ship by Truck- method of fast motor truck shipping, Good Roads campaign, which will be which permits of the farmer attend-

the passing of a national highways bill and the resultant organization of motor truck systems.

Investigation of market and shipping commission merchant are solicited by "When the rod"

Stethoscoping the Engine's "Breathing"

Listening Devices That Will Tell You How the Health of the Motor Car Really Is "It is not a very difficult matter,

To Be Worked in Conjunction With Better Haulage of Produce

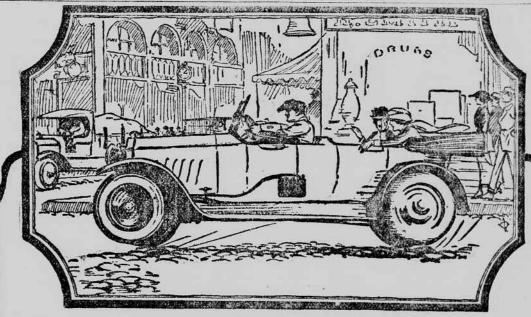
The operation of a system of truck

The operation of a system of truck

The use of the motor truck system for hauls of a longer distance than 150 miles is not advocated. With the direct haul policy in operation, quantities of perishable foodstuffs which formerly rotted in freight cars will be saved and better food at lower prices will prevail.

The use of the motor truck system for hauls of a longer distance than 150 miles is not a very difficult matter is construct an instrument that will expend the construct an instrument that will expend the construct and instrument that will expend the construct apparatus. This may be my





A Million Jolts Had No Effect on Prest-O-Lite

Jolts and jars are not good for any battery, but Prest-O-Lite construction withstands the shocks that send many a storage battery to the junk-pile after a short-life service.

In a recent test, a Prest-O-Lite Storage Battery was attached to a machine that jolted it up and down on a hard surface 560 times a minute for a total of more than a million jolts. At the end of this ordeal a careful examination and test showed a clean score for the battery-no loss of power-no sign of weakness anywhere.

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